L18 ANSWER 45 OF 53 CAPLUS COPYRIGHT 2003 ACS

AB 13C NMR spectra of uridine-4-13C in Salmonella typhimurium 5 S RNA at 37.degree. and 75.degree. are reported. The presence of 8 well-resolved lines at the lower temp. is attributed to the effect of secondary structure upon the uridine resonances and this line structure is suggested as a means of studying such secondary interactions in this species of rRNA. The amt. of rigid secondary structure in the mol. is estd. to be >75%.

AN 1978:84750 CAPLUS

DN 88:84750

TI Carbon magnetic resonance spectroscopy on **carbon-13** -labeled **uracil** in 5S ribonucleic acid

AU Hamill, W. David, Jr.; Grant, David M.; Cooper, R. Beth; Harmon, Shirley A.

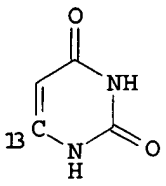
CS Dep. Chem., Univ. Utah, Salt Lake City, UT, USA

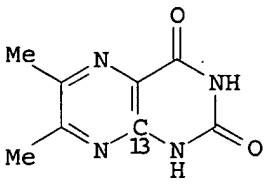
SO Journal of the American Chemical Society (1978), 100(2), 633-5
CODEN: JACSAT; ISSN: 0002-7863

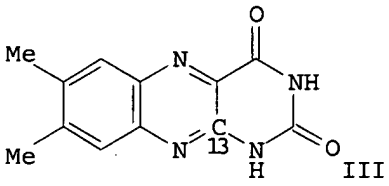
DT Journal

LA English

L18 ANSWER 43 OF 53 CAPLUS COPYRIGHT 2003 ACS
GI


I


II


III

AB The title compds. (I-III, resp.) were prepd. in 2, 4, and 5 steps, resp., from the key intermediate, H2NCONHCOCH213CN, prepd. by condensation of K13CN with ClCH2CO2H in the presence of Na2CO3 at 40-50.degree. followed by reaction with urea.
AN 1978:443325 CAPLUS
DN 89:43325
TI Synthesis of **carbon-13** labeled **uracil**, 6,7-dimethyllumazine, and lumichrome, via a common intermediate: cyanoacetylurea
AU Triplett, J. W.; Mack, S. W.; Smith, S. L.; Digenis, G. A.
CS Coll. Pharm., Univ. Kentucky, Lexington, KY, USA
SO Journal of Labelled Compounds and Radiopharmaceuticals (1978), 14(1), 35-41
CODEN: JLCRD4; ISSN: 0362-4803
DT Journal
LA English

L18 ANSWER 36 OF 53 CAPLUS COPYRIGHT 2003 ACS

AB Unfractionated tRNA from a uracil-requiring auxotroph of Salmonella typhimurium grown in the presence of 90% C-4 13C-labeled uracil is studied by 13C NMR spectroscopy. 13C NMR chem.-shift spectra were obtained at 23.5 kG at 5 temps. over a range of 23-82.degree. and at 84.6 kG at 37.degree.. Spin-lattice relaxation rates were measured at 23.5 kG at 4 temps. over a range of 23-60.degree. and an approx. relaxation rate was measured at 84.6 kG at 37.degree.. Nuclear Overhauser enhancements (NOEs) were measured at 23.5 kG at 37.degree. and at 60.degree.. The spectra show 2 distinct, narrow lines, one assignable to 4-thiouridine and the other to dihydrouridine. The uridine lines along with lines belonging to ribothymidine and pseudouridine form a band of partially resolved lines which result from the chem.-shift nonequivalence of the uridines, pseudouridines, and ribothymidines caused by the secondary and tertiary structure of the mol. The relaxation rate data are analyzed in terms of H+-dipolar, 14N-dipolar, and chem. shift anisotropic relaxation mechanisms. The rotational correlation time is computed to be 3 .times. 10-8 s, which is in agreement with previously reported measurements. Changes in the relaxation rates and the NOEs as a function of temp. are discussed in terms of the unfolding of the mol. and in terms of motional freedom of the D loop compared to the rest of the mol.

AN 1980:509178 CAPLUS

DN 93:109178

TI Nuclear magnetic resonance relaxation studies of **carbon-13** labeled **uracil** in transfer ribonucleic acid

AU Hamill, W. David, Jr.; Horton, W. James; Grant, David M.

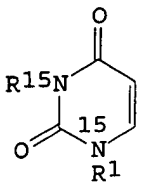
CS Dep. Chem., Univ. Utah, Salt Lake City, UT, 84112, USA

SO Journal of the American Chemical Society (1980), 102(17), 5454-8
CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA English

18 ANSWER 35 OF 53 CAPLUS COPYRIGHT 2003 ACS
GI



I

AB Cyclocondensation of urea-15N2 with CH.tplbond.CCO2H in polyphosphoric acid at 85.degree. for 4 h gave 77.3% uracil-1,3-15N2 (I; R = R1 = H) (II). Random methylation of II with (CD3)2SO4 gave, after ion-exchange purifn., 17.2% I (R = H, R1 = CD3), 18.4% I (R = CD3, R1 = H) and 10.3% I (R = R1 = CD3). The 15N and 1H NMR spectra of the prepd. compds. are reported.

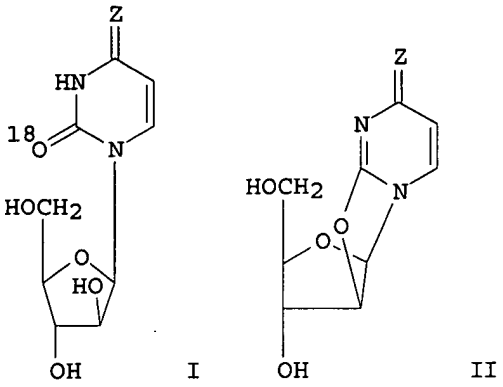
AN 1980:514440 CAPLUS
DN 93:114440

TI Synthesis of **nitrogen-15** labeled **uracil** and its 1-deuteriomethyl, 3-deuteriomethyl, and 1,3-deuteriomethyl derivatives

AU Lipnick, Robert L.; Fissekis, John D.
CS Mem. Sloan-Kettering Cancer Cent., New York, NY, 10021, USA

SO Journal of Labelled Compounds and Radiopharmaceuticals (1980), 17(2), 247-54
CODEN: JLCRD4; ISSN: 0362-4803
DT Journal
LA English

L18 ANSWER 28 OF 53 CAPLUS COPYRIGHT 2003 ACS
GI



I

II

AB The title compds. (I; Z = NH, O, resp.) were prepd. by oxidative ring cleavage of the nucleosides II (Z = NH.HCl, O, resp.) with Na18OH/H218O. The site and level of incorporation of the label was established by mass spectrometry.

AN 1983:107660 CAPLUS

DN 98:107660

TI Oxygen-18-labeled nucleosides. 3. Preparation and mass spectrometric evaluation of 18O2-labeled 1-(.beta.-D-arabinofuranosyl)cytosine and -uracil

AU Schubert, Ernst M.; Schram, Karl H.

CS Dep. Pharm. Sci., Univ. Arizona, Tucson, AZ, 85721, USA

SO Journal of Labelled Compounds and Radiopharmaceuticals (1982), 19(8), 929-35
CODEN: JLCRD4; ISSN: 0362-4803

DT Journal

LA English

18 ANSWER 27 OF 53 CAPLUS COPYRIGHT 2003 ACS

AB Gas chromatog. and mass spectrometric methods for the measurement of the flux through the de novo pyrimidine biosynthetic pathway by quantitating the incorporation of [13C]bicarbonate and 13CO2 into the uracil nucleotide pool in L1210 tumors are reported. Simultaneous measurements of the incorporation of [13C]bicarbonate and the more commonly used [14C]bicarbonate into uridine of L1210 cells in vitro showed that the 2 methods were comparable. A modification of the method was applied to in vivo studies in which the incorporation of 13CO2 into the uracil nucleotide pool of L1210 tumors in mice was quantitated. The measurements were used to det. changes in the flux through the de novo pyrimidine pathway in animals pretreated with known inhibitors of the pathway. A comparison of control animals with those pretreated with 6-azauridine, acivicin, and pyrazofurin resulted in mean percentage inhibitions of 87, 95, and 94%, resp. The title method allows investigation of the resp. contributions of salvage and de novo synthesis in the formation of pyrimidines in vivo and the effects of enzyme inhibitors of the de novo pathway.

AN 1983:518788 CAPLUS

DN 99:118788

TI A carbon-13 tracer method for quantitating de novo pyrimidine biosynthesis in vitro and in vivo

AU Strong, John M.; Anderson, Lawrence W.; Monks, Anne; Chisena, Christine A.; Cysyk, Richard L.

CS Lab. Chem. Pharmacol., Natl. Cancer Inst., Bethesda, MD, 20205, USA

SO Analytical Biochemistry (1983), 132(2), 243-53
CODEN: ANBCA2; ISSN: 0003-2697

DT Journal

LA English

L18 ANSWER 18 OF 53 CAPLUS COPYRIGHT 2003 ACS

AB On the basis of a valence force field, the frequencies of the vibrational modes of uracil and its 18O derivs. substituted in the 2-, the 4- and the 2,4-positions, were calcd. The frequencies were compared with those available from the UV resonance Raman spectra. The resonance Raman bands obsd. exptl. in the spectra of the uracil 2-, 4- and 2,4-dithio derivs. were calcd. with an equiv. extended force field, and a tentative assignment of these lines is proposed.

AN 1986:487745 CAPLUS
DN 105:87745

TI Interpretation of the vibrational modes of **uracil** and its **oxygen-18**-substituted and thio derivatives studied by resonance Raman spectroscopy

AU Ghomi, M.; Letellier, R.; Taillandier, E.; Chinsky, L.; Laigle, A.; Turpin, P. Y.
CS Lab. Spectrosc. Biomol., Bobigny, 93000, Fr.

SO Journal of Raman Spectroscopy (1986), 17(3), 249-55
CODEN: JRSPAF; ISSN: 0377-0486
DT Journal
LA English

18 ANSWER 3 OF 53 CAPLUS COPYRIGHT 2003 ACS

AB A mixt. of 13C-carbon monoxide, nitrogen, and water was irradiated with high energy protons. 13C-labeled uracil was identified in the product by GC/MS, resulting in confirmed abiotic formation of uracil, one of the RNA bases.

AN 1997:626963 CAPLUS
DN 127:247955

TI Abiotic synthesis of uracil from carbon monoxide, nitrogen and water by proton irradiation

AU Kobayashi, Kensei; Tsuji, Toru
CS Department Physical Chemistry, Yokohama National University, Yokohama, 240, Japan

SO Chemistry Letters (1997), (9), 903-904
CODEN: CMLTAG; ISSN: 0366-7022
PB Chemical Society of Japan
DT Journal
LA English

L15 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS

AB The incorporation of C-4 **C-13**-labeled **uracil** into tRNA of a mutant strain of Salmonella typhimurium and its C NMR spectrum at 37.degree. and 82.degree. are reported. In addn. to the major line belonging to labeled uridine in tRNA, 2 smaller lines, 1 assigned to dihydrouridine and the other tentatively assigned to pseudouridine, were obsd. Changes in the spectra going from 37.degree. to 82.degree. are discussed in terms of known models for tRNA.

AN 1976:131665 CAPLUS
DN 84:131665

TI Magnetic resonance spectroscopy on carbon-13 labeled uracil in transfer ribonucleic acid

AU Hamiill, W. David, Jr.; Grant, David M.; Horton, W. James; Lundquist, Ronald; Dickman, Sherman
CS Dep. Chem., Univ. Utah, Salt Lake City, UT, USA

SO Journal of the American Chemical Society (1976), 98(5), 1276-8
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English

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6 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS
AB Chem. shift assignments are made for the C atoms of the **uracil** -bisulfite adduct by specific labeling with D and **C-13** . The signals of the analogous adducts from 5-chlorouracil and 5-fluorouracil are assigned.
AN 1977:536255 CAPLUS
DN 87:136255
TI Carbon-13 chemical shift assignments for the bisulfite adducts of uracil, 5-deuterouracil, 5-fluorouracil and 5-chlorouracil
AU Triplett, J. W.; Digenis, G. A.; Layton, W. J.; Smith, S. L.
CS Coll. Pharm., Univ. Kentucky, Lexington, KY, USA
SO Spectroscopy Letters (1977), 10(3), 141-7
CODEN: SPLEBX; ISSN: 0038-7010
DT Journal
LA English

L16 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS
AB The incorporation of C-4 **C-13**-labeled **uracil** into tRNA of a mutant strain of Salmonella typhimurium and its C NMR spectrum at 37.degree. and 82.degree. are reported. In addn. to the major line belonging to labeled uridine in tRNA, 2 smaller lines, 1 assigned to dihydrouridine and the other tentatively assigned to pseudouridine, were obsd. Changes in the spectra going from 37.degree. to 82.degree. are discussed in terms of known models for tRNA.
AN 1976:131665 CAPLUS
DN 84:131665
TI Magnetic resonance spectroscopy on carbon-13 labeled uracil in transfer ribonucleic acid
AU Hamiill, W. David, Jr.; Grant, David M.; Horton, W. James; Lundquist, Ronald; Dickman, Sherman
CS Dep. Chem., Univ. Utah, Salt Lake City, UT, USA
SO Journal of the American Chemical Society (1976), 98(5), 1276-8
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English

L16 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS
AB **Carbon-13** NMR spectral studies of .beta.-pseudouridine were compared with **thymine**, **uracil**, uridine, and .beta.-cyanuric acid riboside and of showdomycin were compared with maleimide and citraconimide.
AN 1973:453724 CAPLUS
DN 79:53724
TI Carbon-13 NMR spectra of C-nucleosides. Showdomycin and .beta.-pseudouridine
AU Chenon, Marie T.; Pugmire, Ronald J.; Grant, David M.; Panzica, Raymond P.; Townsend, Leroy B.
CS Dep. Chem., Univ. Utah, Salt Lake City, UT, USA
SO Journal of Heterocyclic Chemistry (1973), 10(3), 427-9
CODEN: JHTCAD; ISSN: 0022-152X
DT Journal
LA English

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17 ANSWER 44 OF 61 CAPLUS COPYRIGHT 2003 ACS

AB Chem. shift assignments are made for the C atoms of the **uracil** -bisulfite adduct by specific labeling with D and **C-13** . The signals of the analogous adducts from 5-chlorouracil and **5** -**fluorouracil** are assigned.

AN 1977:536255 CAPLUS

DN 87:136255

TI Carbon-13 chemical shift assignments for the bisulfite adducts of **uracil**, 5-deuterouracil, **5-fluorouracil** and 5-chlorouracil

AU Triplett, J. W.; Digenis, G. A.; Layton, W. J.; Smith, S. L.

CS Coll. Pharm., Univ. Kentucky, Lexington, KY, USA

SO Spectroscopy Letters (1977), 10(3), 141-7
CODEN: SPLEBX; ISSN: 0038-7010

DT Journal

LA English

18 ANSWER 52 OF 53 CAPLUS COPYRIGHT 2003 ACS

AB First-order 13C spectra have been obtained for uracil, thymine, and the 5-halouracils. The 13C chem. shifts in these compds. are correlated reasonably well with .pi. and total electron charge ds. calcd. with extended-Hueckel theory. In addn., for the 5-halouracils the 13C chem. shifts are correlated quite well with substituent electronegativity, EX. Substituent effects are discussed for the directly-bonded and long-range 13C-H couplings, and correlations are obtained between these couplings and EX for the halogens. Without exception, 3-bond 13C-H couplings are larger than the 2-bond couplings for this series of compds.

AN 1971:482221 CAPLUS
DN 75:82221

TI **Carbon-13** nuclear magnetic resonance spectra of **uracil**, **thymine**, and the 5-halouracils

AU Goldstein, J. H.; Tarpley, A. R., Jr.
CS Chem. Dep., Emory Univ., Atlanta, GA, USA

SO Journal of the American Chemical Society (1971), 93(15), 3573-8
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English